



ROOM TO RUN

AMERICA HAS AMPLE FISCAL SPACE — AND SHOULD USE IT TO TACKLE PRESSING ECONOMIC AND CLIMATE CHALLENGES

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Executive Summary

Even before the COVID-19 pandemic the United States faced multiple protracted crises that jeopardized the nation's economic viability and future prosperity — structural inequality, too few good jobs, a caregiving shortage and climate change. The \$2 trillion American Jobs Plan (AJP) takes a solid step toward addressing these challenges with investments in infrastructure, economy-wide decarbonization and environmental justice, and caregiving that will yield a more productive, equitable, and sustainable economy. But with needs estimated at roughly five times as much as the AJP proposes, there is still a long way to go.

This report explains why Congress has ample fiscal space to responsibly pursue such an agenda — and why a failure to use this space actively endangers America's economic future, making everything more difficult: recovering from the pandemic; redressing economic, gender and racial inequities; meeting the climate challenge; competing on technologies of the future and managing the country's long-term fiscal position. We find that:

- Past policy decisions pulled the rug from underneath economic expansions too soon by providing too little fiscal support and tightening interest rates too early. Far from an overheating economy, America has run its economy “too cold,” leaving millions of potential workers out of the labor force, forestalling broad wage growth, and deterring investments that would boost long-run efficiency, productivity and prosperity.
- Relative to the pre-Great Recession trend — which was still below full employment — inadequate fiscal policy cost the economy at least \$8.2 trillion in GDP combined from 2010 to 2019. This amounts to \$32,317 in lost income per adult — roughly equivalent to one year's income for the median household with two adults. These costs have been borne disproportionately by lower-income workers, women and communities of color.
- Past policy choices have been guided by the Congressional Budget Office's (CBO) mistaken projections that consistently underestimated “potential output” and overestimated future interest rates. These mistaken projections exaggerated budgetary costs and led policymakers to hit the brakes on spending far too early in past recoveries, entrenching longstanding racial and gender inequities and

detering investments that would raise efficiency and living standards over the long term.

- Built into the CBO model are deeply problematic and racialized assumptions about how low the unemployment rate can go without sparking inflation, known as the “natural rate.” CBO defines a “natural rate” for Black workers that is more than double the rate of white workers, and a “natural rate” for Latinos more than one-third higher.
- Going too small on spending in past recoveries did more than make the economy more unequal — it created a self-reinforcing cycle of economic underperformance that permanently reduced America’s potential for growth and prosperity.

Simply returning the economy to its pre-pandemic status quo is not an option. Congress should now run the economy “hot,” investing big to achieve true full employment, redress chronic racial and gender inequalities, and avert a looming climate catastrophe. Such investments will make the economy fairer, more sustainable and more efficient while ensuring the country has the resources to keep building towards greater and more broadly shared prosperity.

1. Introduction

The American Rescue Plan (ARP) marked a beginning, not the end, of an effort to put America's economy back on track. The ARP provided much needed emergency economic relief to lift the American people from the depths of a public health crisis and the related and unprecedented economic fallout. Putting vaccines into people's arms and money into the pockets of struggling families and small businesses is essential. But with economic recovery riding on unprecedented stimulus efforts and new unemployment claims still outpacing the worst period of the Great Recession (Shierholz 2021), returning the nation to its full economic health and potential will take a lot more effort.

Simply returning the economy to its pre-pandemic status quo is not enough. Even before COVID-19 plunged the country into the sharpest contraction since the Great Depression, the United States was facing protracted structural crises that threatened its economic viability and future prosperity (Hersh and Paul 2020). The economy did not work for too many people in America, relegating tens of millions to financial precarity with structural inequalities and too few good jobs. Women and people of color — and, in particular, women of color — bore the brunt of this deeply unequal economy. COVID-19 laid bare these untenable fragilities that, under stress, served as fault lines to transmit and amplify economic instability — not to mention the pandemic itself. The disruptions everyone has experienced over the past year serve as a stark warning of what potential future crises may look like if we fail to address the looming threat of climate change.

Now, the Biden-Harris administration is proposing the \$2 trillion American Jobs Plan (AJP). This plan would take a step in the right direction to addressing these challenges, providing fiscal support to create jobs and investments that yield a more productive, equitable, and sustainable economy through infrastructure modernization and deep decarbonization (White House 2021).¹ However, to truly move beyond the immediate needs of the rescue effort and rebuild an economy that can work for all and secure long-term resilience much more is needed — by some estimates, roughly five times more, or more than \$10 trillion (THRIVE Agenda 2021; Bivens 2021).

This report explains why Congress has ample fiscal space to responsibly pursue such an agenda — and why a failure to use it actively endangers America's economic future. Critics say the spending at this level risks “overheating,” or, a rapid acceleration of inflation. In fact, we show this kind of short-sighted policy thinking has long undermined

America's potential for economic growth, and left the middle class, working families, and communities of color with a steadily declining standard of living. Far from an overheating economy, America has been saddled with one that runs persistently too cold, leaving millions of potential workers — disproportionately workers of color — out of the labor force, forestalling widespread wage growth and deterring investments that would boost long-run efficiency, productivity and prosperity. The result has been persistent yet utterly preventable economic insecurity for far too many.

Following the advice of deficit hawks and inflation alarmists, past policy decisions have cut short economic expansions by supplying too little fiscal support and tightening interest rates too soon. The approach also tacitly endorsed unemployment rates for Black and brown workers to remain elevated relative to white workers — causing economic harms that compound over lifetimes — though all workers suffered as a result.

The outcome was not simply a more unequal economy. Allowing the economy to run too cold created a “doom loop” whereby diminished expectations translated into lower investment, lower investment into lower productivity growth and employment, in turn diminishing expectations. Through subsequent cycles of expansion and downturn we have literally seen America's long term economic potential bent down to a lower trajectory. This slower path makes everything harder — recovering from the pandemic, redressing inequality, addressing the caregiving crisis, meeting the climate challenge, competing on technologies of the future, and managing our long-term fiscal position are all farther from reach because policymakers chose to run the economy too cold.

Relative to the pre-Great Recession trend, the U.S. economy lost at least \$8.2 trillion in GDP in total over the ten years 2010-2019 with inadequate fiscal policy support for economic recovery. This amounts to \$32,317 in lost income per adult — roughly equivalent to losing one year's income for the median U.S. household with two adults.

The cost has been enormous. Relative to the pre-Great Recession trend, the U.S. economy lost at least \$8.2 trillion in GDP in total over the ten years 2010-2019 with inadequate fiscal policy support for economic recovery. This amounts to \$32,317 in lost income per adult —

roughly equivalent to losing one year's income for the median U.S. household with two adults. For many, that extra income is the difference between keeping a roof over their family's head and homelessness; having sufficient food on the table and an empty stomach; accessing critical medicine or praying for a miracle; keeping the house warm during the cold winter or shivering at night.

Instead, Congress should aim to run the economy “hot,” keeping its foot on the accelerator until it reaches a true level of full employment: where everyone who can and wants to work can find a good job; where businesses have incentives for strong investment and innovation; and where the economy's real resources can be put to work improving people's lives instead of laying idle on the sidelines. Only then do we create sustained pressure for widespread wage growth and an economy that works for everybody.

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can and wants to work can find a good job.**

To understand why, Section 2 of the report explains the concept of “potential GDP,” and its cousins, the “natural rate” of unemployment and the “output gap,” that relate the level of output and unemployment to inflation. These are theoretical constructs that demarcate a boundary between “hot” and “overheating.” But the ways economists — including those at the Congressional Budget Office — guess their values are off base, build structural racial discrimination into economic policymaking, and vastly overstate the costs of pursuing bolder fiscal policy. It is on this flimsy foundation that deficit fearmongers and inflation alarmists rest their case. Not only is the actual output gap larger than critics and official statistics imply, but spending big now to increase employment and productivity will raise America's long-run economic potential and render concerns about overheating even more remote.

Section 3 explores the short- and long-term costs of allowing the economy to run too cold. These costs are borne disproportionately by lower-income working people and communities of color, although there is also a significant toll on the overall economy from slower investment and productivity growth. The costs of running too cold overwhelmingly dwarf the risks of potentially overshooting on inflation.

Section 4 explains that prioritizing infrastructure modernization, deep decarbonization, and development of a robust caregiving infrastructure will meet the country's most pressing needs while raising productivity and expanding the labor force necessary for stronger growth. In fact, this approach to raising employment and incomes now while boosting productivity for stronger future growth is the only way America will make up the ground lost to deep downturns and incomplete recoveries and lay the foundation to put the economy on a path to more robust, inclusive, and sustainable growth.

We conclude by affirming that America has plenty of fiscal room to achieve these goals. Such space is not unlimited, but making investments that increase employment and productivity will improve equity and economic efficiency while ensuring the country has the resources to keep fostering greater prosperity.

2. Underestimating America's potential undermined the real economy

Much of the economic debate surrounding recent emergency relief and recovery packages revolved around a few key hypothetical constructs economists use to theorize the economy's overall capacity — namely “potential GDP,” or “output,” the “output gap,” and the “natural rate” of unemployment. Economists conceive of “potential GDP” as the maximum level of output that can be sustained using available capital and labor resources without sparking undue consumer price inflation. It is also sometimes referred to as “full employment output,” which is misleading because it assumes some acceptable level of unemployment — presented as the “natural rate” — at a level that keeps inflation from accelerating. Together, they define an economy's supply-side constraints.

Over time, economic potential can expand from growth in the size of the labor force and the stock of capital assets available to do work, or from an increasing level of technology.² Actual GDP at any given point in time is determined by the level of demand — how much stuff families, businesses, and governments buy — and the difference between potential and actual GDP is referred to as the “output gap.” Overheating (runaway inflation) can occur if demand is so strong as to push output consistently above its potential. Letting too much money chase after a finite amount of resources pushes prices up at an accelerating pace, so the theory goes. The opposite is also possible: if demand is persistently low,

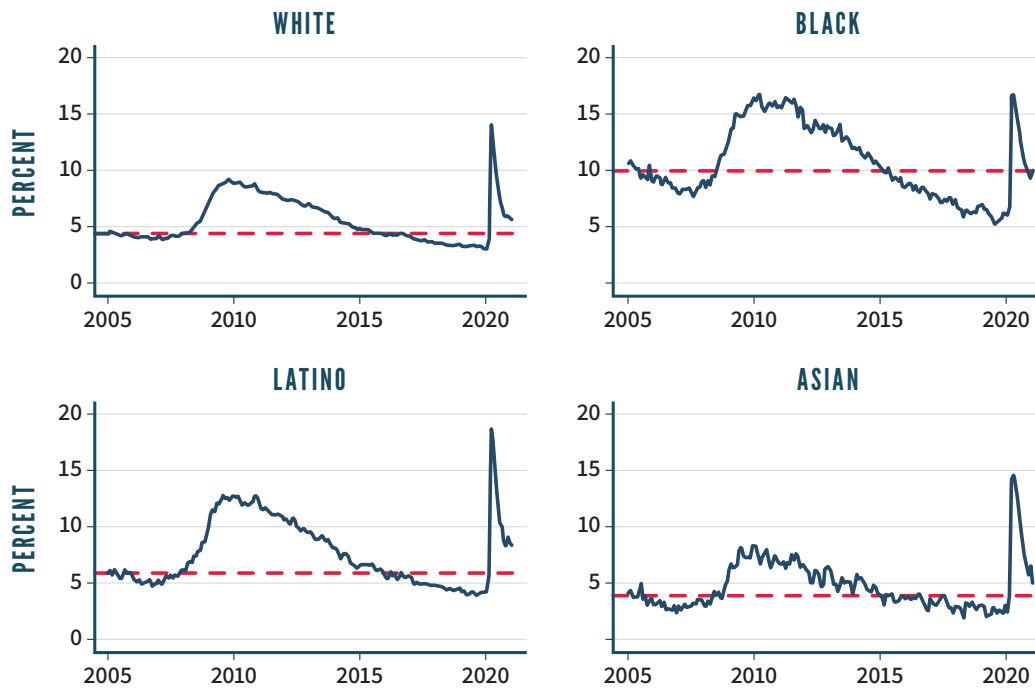
the economy will run too cold to employ enough workers, dampening incentives for new investment and innovation.

THE TROUBLE WITH CBO ASSUMPTIONS

Policymakers rely on the Congressional Budget Office (CBO) to tell them where potential output lies to assess how much fiscal stimulus is appropriate and when they should tighten interest rates. But again, these are theoretical constructs that no one observes or measures in the real world. It is generous to say these estimates provide educated guesses; in fact, the numbers are based on a variety of assumptions, some of which are highly problematic.³

Figure 1

TO CBO, NOT ALL NATURAL RATES ARE CREATED EQUAL



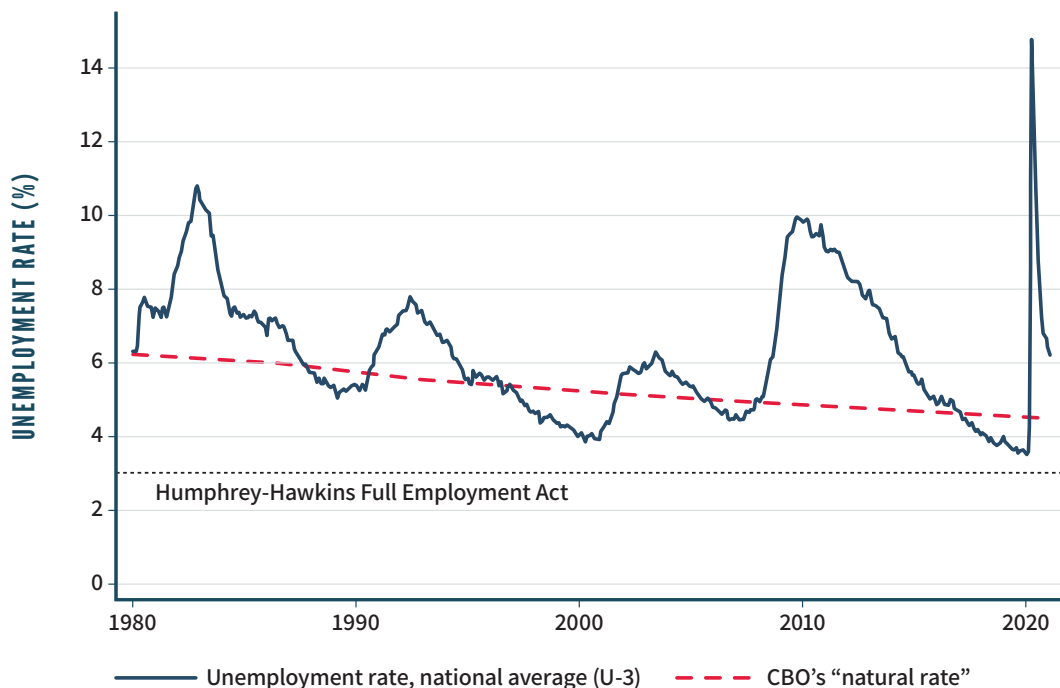
Actual unemployment (**blue**) and CBO assumed natural rates of unemployment (**red**), by race

Source: Authors' analysis of CBO and BLS data.

For example, since 2005, CBO assumes “unemployment for different demographic groups (by age, sex, education, and race) were approximately at their natural rates in 2005” (Shackleton 2018). CBO does this *for each group*, including by race; whatever the unemployment rate was for each group in 2005, that’s what CBO assumes is the lowest unemployment should get for each group of workers. We illustrate this graphically in **Figure 1**, showing the 2005 unemployment rate for white (4.4 percent), Black (10 percent), Latino (6 percent), and Asian (4 percent) workers as a red dashed line superimposed on each groups’ unemployment rate since that time in blue. As Williams (2021) emphasizes, this assumption surreptitiously embeds racial disparities into policymaking decisions about how much employment is enough.⁴ For context, the CBO’s assumptions would mean the Black jobless rate, which dropped to 5.2 percent in August 2020 with no inflationary consequences, would never be expected to fall beneath the peak overall unemployment rate during the Great Recession — 10 percent in October of 2009.

Figure 2

THERE’S NOTHING NATURAL ABOUT UNEMPLOYMENT



U.S. unemployment rate and CBO “natural rate,” 1980–2021

Source: Authors’ analysis of BLS and CBO data.

Historically, CBO and many economists assumed the natural rate, or the full employment rate of unemployment, stood roughly fixed around 5.5-6 percent, though their current estimates put the natural rate just north of 4.5 percent. This is not the same concept as maximum employment “for those able, willing, and seeking work” envisioned by Congress in the 1946 Full Employment Act, nor is it the target of maximum 3 percent unemployment, and lower thereafter, mandated by the 1978 Humphrey-Hawkins Act.⁵ Indeed, the unemployment rate remained at or below 4 percent during 2018 and 2019 while inflation was still undershooting the Fed’s 2 percent target (see below). The CBO numbers, in essence, are divined from received economic wisdom. Although policy biased to run the economy too cold has meant unemployment spends most of the time above the natural rate (**Figure 2**), measured unemployment has fallen below the natural rate threshold often enough without sparking inflation to cast doubt on the entire enterprise (Solow 2018; Galbraith 1997).

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LOTS OF SLACK AND BELOW-TARGET INFLATION

In fact, economists have strained to derive a regular short-term relationship between changes in unemployment and changes in inflation. Recent statistical evidence finds weak and weakening linkages between the level of unemployment and price inflation (Bernstein and Bentele 2019), and that the risk of wage-push inflation only appears when inflation runs consistently higher than what the U.S. economy has experienced in the past generation (Gagnon 2017). Certainly, any historical linkage would have been severely weakened by the precipitous decline of union density, and the cost-of-living adjustments written into collective bargaining agreements.

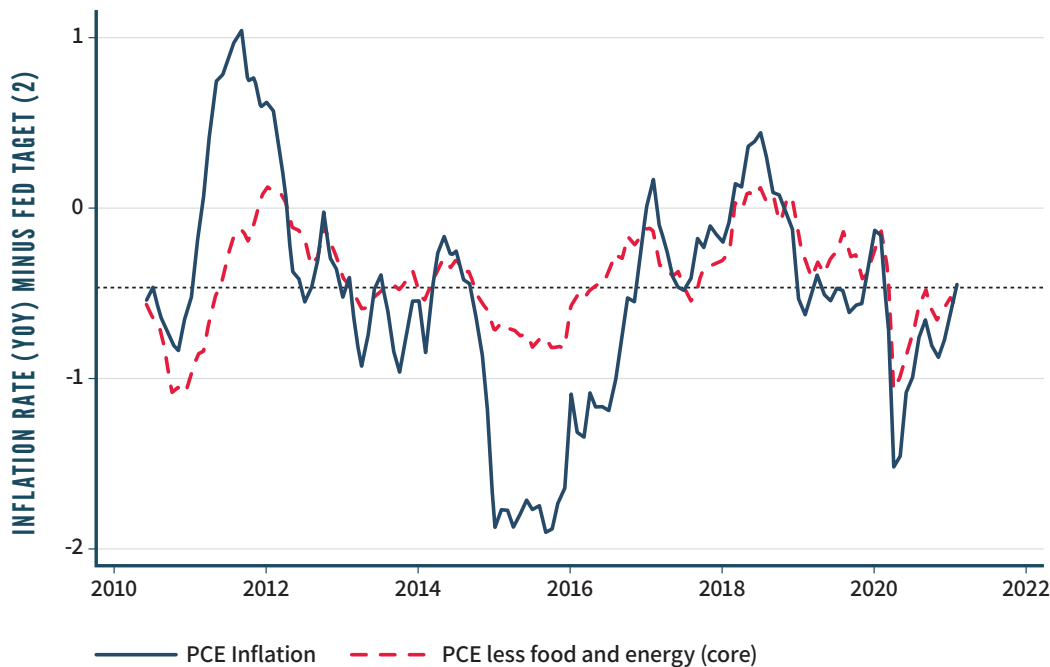
Official unemployment statistics could also be understating the true extent of unemployment. The Council of Economic Advisors (Rouse 2021) presented adjusted headline unem-

ployment rates in February 2021 to account for the more than 4 million workers who have dropped out of the labor force in the past year, as well as for well-known survey misclassification issues related to the pandemic. However, mass exit from the labor force is not so recent a phenomenon (Hersh and Paul 2020). As Federal Reserve Bank of Minneapolis President Neel Kashkari put it:

“Even before the pandemic hit, in my estimation, we were not yet at what we called maximum employment. Maximum employment, for me, is a labor market that is tight enough that it generates 2 percent inflation on average over time” (Long 2021).

Figure 3

INFLATION FALLS WELL SHORT OF THE FEDERAL RESERVE’S 2 PERCENT TARGET RATE



Inflation averaged 0.5 percentage points below target over the last expansion

Note: 0 indicates inflation equal to the Federal Reserve’s target rate

Source: Authors’ analysis of BLS and CBO data.

Such a view is certainly consistent with other measures of labor market slack like the prime-age employment-to-population ratio, which only reached its pre-Great Recession peak after 13 years, on the eve of the COVID-19 pandemic. However, it also could be the case that the true natural rate of unemployment is much lower than most economists have thought — as Mr. Kashkari also suggests (Long 2021).

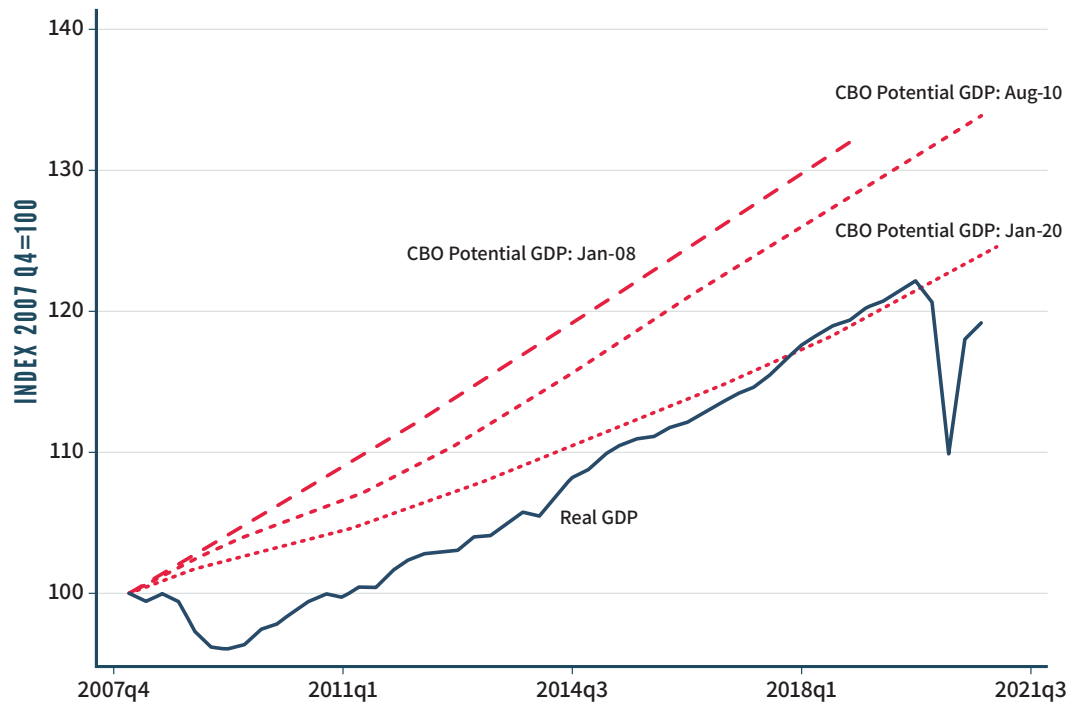
MIT economist Olivier Blanchard posits a simple test for gauging the accuracy of potential output and natural rate estimates: “[T]he best tool remains the inflation signal” (Blanchard 2018). **Figure 3** shows the U.S. economy has been running much larger gaps than CBO estimates would indicate. We subtract the year-on-year change in the personal consumption expenditures price index — the Federal Reserve’s preferred measure of inflation — from the Fed’s official target of 2 percent and plot this from June 2010, or 12 months after the Great Recession ended.⁶ In other words, if the line is below zero, inflation was below target — which it was in 79 percent of the months during this nearly ten-year span. Even more curious, CBO (2017) seems to be aware that their model is biased toward overestimating inflation.

Policies that favor low inflation over a more robust labor market in effect privilege the capital income of investors over the wage growth of workers.

There is nothing magical about a 2 percent inflation rate, as the Fed’s recent shift in policy framework illustrates. As an empirical matter, 2 percent is no different than the 2.5 percent or even 3 percent the Fed may now be willing to tolerate for some time to make up for past undershooting of its goal — a prospect that has already generated some pearl-clutching from more conservative economists (Irwin 2021). Although the thought of inflation may trigger economists who came of age during the 1970s, there is no discernible statistical relationship between inflation at any reasonable level and negative impacts on economic performance among advanced economies (Pollin and Zhu 2006). Policies that favor low inflation over a more robust labor market in effect privilege the capital income of investors over the wage growth of workers. Owners of financial assets are hurt most by moderate inflation, though with no impact on growth; debtors actually benefit from inflation that reduces what they owe in real terms.

Figure 4

UNDERESTIMATING POTENTIAL GDP FEEDS ECONOMIC DECLINISM



Actual inflation-adjusted GDP and CBO projected potential GDP, indexed to the pre-Great Recession peak

Source: Authors' analysis of BEA and CBO data.

The evidence of underperformance in unemployment and other measures of labor market slack, along with undershooting the Fed's inflation target are key signs that potential output for the U.S. economy is significantly higher than CBO projections suggest. This means the output gap between actual GDP and potential is larger than inflation hawks admit, meaning there is significantly more space to run the economy hotter without adverse consequences (Summers 2021a, b; Blanchard 2021; Mankiw 2021). There are, however, serious adverse consequences from running the economy too cold.

Consistently underestimating economic potential creates a cycle of self-fulfilling underachievement wherein diminished expectations and insufficient policy responses, over time, ratchet down actual economic potential (Fatas 2019; Fontanari, et al. 2019).

Figure 4 illustrates this downgrading following the Great Recession. Each line is indexed to 2007q4, at the peak of the prior economic expansion. The blue line plots actual,

inflation-adjusted GDP as it plunged during the Great Recession, and then turned up again until the onset of the COVID-19 pandemic in 2020q1.

SERIAL ECONOMIC UNDERACHIEVEMENT

The set of three red-dashed lines shows the Congressional Budget Office's forecasts for potential output at different vintages. The topmost line plots CBO's projection in January 2008. At the time, CBO did not yet know the economy had entered a downturn; the line reflects the trend growth over the preceding years. The medium-dashed line plots CBO's August 2010 projection, a month before economists officially identified the end of the recession as June 2009 (NBER 2010). The economy was on the upswing in 2010, but CBO projections had already permanently downgraded potential GDP by 2 percent. In the last projection plotted, from January 2020 — just before our economy felt the COVID-19 shock — CBO estimated U.S. potential GDP was nearly 10 percent below what it was projecting for the economy in 2008. In other words, they assumed the economy would never fully recover from the Great Recession. At each vintage, CBO made its projections using preliminary data. But subsequent revisions all raised the preceding estimates of actual GDP (BEA 2021; CBO 2014), meaning CBO's initial estimates had underestimated potential output even more.

The economy never recovered and this was predictable. As Federal Reserve economist Robert F. Martin and co-authors (2014) observed, “output typically does not return to pre-crisis trend following recessions, especially deep ones,” cautioning against the assumption that the economy will magically rebound to its previous trend. Instead, policy-makers were lulled into complacency because of misleading estimates of potential output that reflected the cyclical downturn rather than permanent losses to supply-side potential (Coibion, et al. 2018).

Persistent shortfalls in aggregate demand can be addressed through expansionary fiscal policy, which will pay for itself through higher growth.

Our analysis of rapidly deteriorating potential output following the Great Recession finds that, relative to the pre-recession trend, the U.S. economy lost a total of \$8.2 trillion in GDP

over the ten-year period between 2010 and 2019 following inadequate fiscal support for economic recovery. These costs amount to \$32,317 in lost income per adult — roughly equivalent to losing one year's income for the median household with two adults. Even before the pandemic, 37 percent of households reported not having sufficient savings to pay for an unexpected \$400 emergency with cash (Federal Reserve 2020). At present, 63 percent of households with annual incomes below \$150,000 experienced difficulties paying their usual household expenses in the past week (U.S. Census 2021). For many, that extra income is the difference between keeping a roof over their family's head and homelessness; having sufficient food on the table and an empty stomach; accessing critical medicine or praying for a miracle; keeping the house warm during the cold winter or shivering at night.

The tragedy is that economists should have known better and yet refused to use the tools that we know can fix the problem. Persistent shortfalls in aggregate demand can be addressed through expansionary fiscal policy, which will pay for itself through higher growth (DeLong and Summers 2012). Running the economy hot can not only restore employment levels, but also supercharge investments that increase productivity growth and therefore potential output — and thus the ability to sustain more aggressive policy action (Ball 2015).

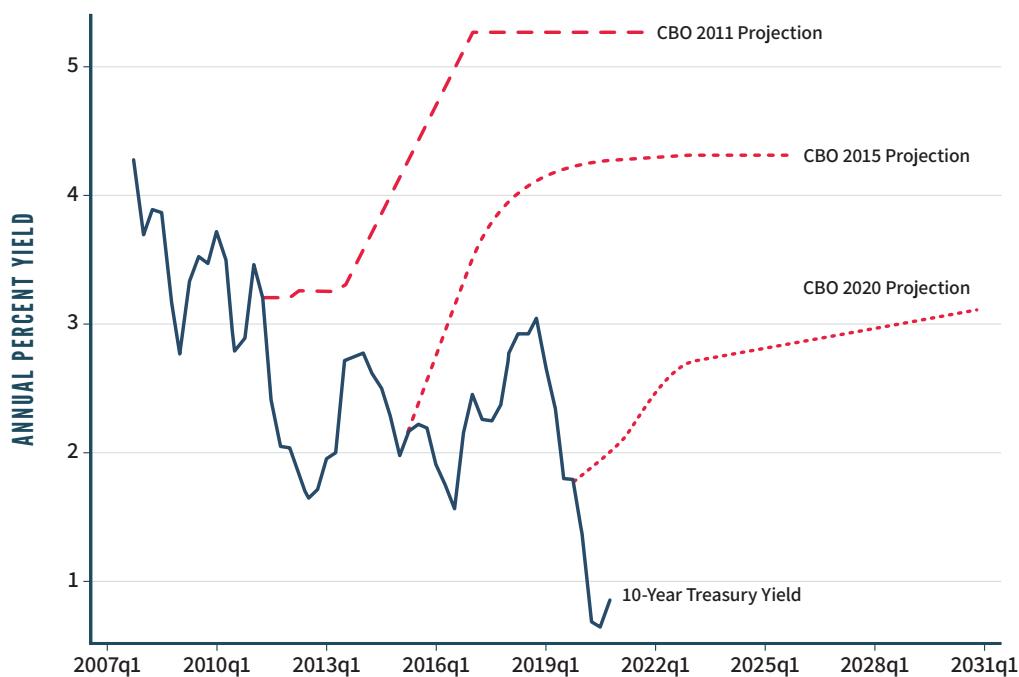
DAMAGING FISCAL FALSEHOODS

Unfortunately, the CBO's faulty assumptions introduced another needless drag on growth: because the agency's model of the economy was so faulty, it consistently overpredicted rising interest rates in its economic projections (**Figure 5**). In 2011, the oldest outlook available from CBO, forecasters predicted interest rates on the 10-year Treasury note would rise to 5.25 percent by the fourth quarter of 2019 as employment recovered, creating upward inflationary pressure. We know now that the recovery imagined by CBO never materialized and in reality, Treasury yields fell to 1.79 percent with the weakness of the recovery. Although subsequent projections pared down the interest rate outlook, CBO continued to severely overestimate the extent to which interest rates would rise. Here, CBO is significantly out of step with the rest of the economics, which has known for some time that equilibrium interest rates were much lower than CBO's models suggest (Laubach and Williams 2003; Holston, et al. 2017).

This forecast error also means CBO overstated the actual federal budgetary costs of debt service, conveying to policymakers that fiscal policies to support the economy were significantly more costly than they really were. The CBO was not alone. In financial markets, which are similarly fretting over inflation uncertainties, interest rate forward contracts regularly show the same overprediction of future rates. Congress should be leery of falling prey to this mistake again by underdelivering fiscal support for economic recovery.

Figure 5

CBO CONSISTENTLY OVERPREDICTS RISING INTEREST RATES



Actual versus CBO projected 10-year Treasury yields

Source: Authors' analysis of CBO and Federal Reserve data.

3. The untold costs of running too cold: wasted human capital and suppressed business investment

Strong economic growth can lead to shared prosperity. But this only occurs when the economy is at, or very close to, full employment. This was the case during World War II — where unemployment averaged just 1.7 percent from 1943-45 — and at certain times during the post-war boom, producing what economists Claudia Goldin and Robert Margo (1992) refer to as “The Great Compression:” a decade marked by a substantial narrowing of the income gaps between rich and poor as well as between Black and white (Tankersley 2020). Most of the time, however, policymakers have run the economy too cold. The resulting unemployment, underemployment, and exclusion from the labor market affects millions of people and imposes sizable short- and long-term costs for workers and their families. It also compromises the growth and stability of the economy as a whole, as Fed Chair Jerome Powell has recognized.

Running the economy below potential snowballs America's growing inequality crisis with perpetual wage and income stagnation.

A too-cold economy allows unemployment to remain unnecessarily elevated. Because most people need to work for a living, excess unemployment not only leaves the unemployed in a financially precarious position, but their loss of income spills over to other workers and businesses who rely on this income for their own livelihoods. Seeing less demand causes businesses to hold back on investment, causing slack in those industries and forgoing the benefits of productivity increases.

Running the economy below potential snowballs America's growing inequality crisis with perpetual wage and income stagnation. When there are more unemployed people than job openings — typically the case, as shown in **Figure 2** above — it is difficult for workers to bargain for wage increases. In fact, workers have experienced wage growth in only 10 of the past 40 years (Gould 2020). It is not just wages that suffer. Slack labor market conditions tend to reduce the hours of work available to people at a given wage rate, such

that annual earnings are reduced even if wages are not (Bivens and Zipperer 2018). The resulting bouts of unemployment drag down earnings and push people into despair: a one percentage point increase in unemployment is associated with a 0.4-0.7 percentage point increase in the poverty rate (Hoynes, et al. 2016).

DISPROPORTIONATE EFFECTS ON VULNERABLE GROUPS

The costs of running a too-cold economy fall disproportionately on low-income communities and communities of color. The flat and at times falling real wages perpetuated by weak labor markets disproportionately hurt the bottom quarter of earners (Federal Reserve Bank of Atlanta 2021). The only time significant wage growth occurs for workers at the low-end of the wage distribution is during high-pressure labor markets (Bunker 2017). Moreover, during particularly tight labor markets wage growth for low-income workers exceeds wage growth for high-income workers, helping to reduce inequality.

High-income workers experience income gains regardless of labor market conditions. Jared Bernstein and Keith Bentele (2019) find that workers in the bottom quintile of annual earnings receive 6.1 percent higher earnings in tight labor markets compared to slack ones, while the top 5 percent only see an additional 0.5 percent rise in real earnings during tight labor markets, compared to slack ones. As a result, top-income earners tend to benefit no matter the labor market conditions, and therefore do not have the same vested interests when it comes to ensuring tight labor markets.

Excess slack in the labor market results in disproportionately high levels of unemployment, underemployment, and lackluster wage growth for Black and brown workers, as well as other traditionally stigmatized in the labor force. Black workers are twice as likely, on average, to be forced into unemployment as white workers; the ratio is 1.7 times for Latino workers (Paul et al. 2018). During economic downturns, workers of color tend to lose ground relative to white workers in terms of wages and income. Workers of color only narrow the wage gap with white workers when labor markets run very tight — though still not nearly enough to eliminate racial discrimination in labor markets (Federal Reserve Bank of Atlanta 2021; Cajner et al 2017). As a result, a too-cold economy furthers the divergence in unemployment and earnings between white workers and workers of color (Baker and Bernstein 2013). Thus, running the economy hot is a powerful, albeit insufficient, tool for chipping away at racial inequality.

The cost of running the economy too cold is not just felt in temporary spells of unemployment and earnings stagnation. It compounds with effects on income and wealth that can last a lifetime. While economic theory posits that any short-term effects from deviations to full employment will be quickly corrected as markets adjust, research finds robust evidence for long-term scarring — meaning lower earnings and productivity and more frequent and longer spells of unemployment — associated with weak labor market conditions, especially for those unfortunate to enter the job market during a period of high unemployment.

Following the Great Recession, groups that experienced deeper economic downturns faced weaker labor markets for years to come, including substantial declines in the working-age employment rate. These impacts were concentrated among older workers, who are also more likely to be long-term unemployed, and lower-earning workers (Yagan 2019). Others found substantial long-term scarring in terms of labor market participation and earnings for new labor market entrants during the Great Recession (Rothstein 2020). Graduating into a recession is associated with a 9 percent decline in annual earnings, though earnings can potentially be clawed back over the course of a decade. Worse, earnings reductions and their duration are concentrated among less advantaged groups, and in some instances can be permanent (Oreopoulos et al 2012). On average, men losing their job in a normal economy lose the equivalent of 1.4 years of earnings. However, when unemployment is near recession levels, they lose an average of 2.8 years of earnings (Davis and Von Wachter 2011). Adverse long-term effects from weak labor markets also ripple across families, reducing early childhood nutrition and educational achievement, particularly for low-income families and those without a college degree (Garfinkel et al. 2016).

DRAG ON INVESTMENT AND PRODUCTIVITY

The harms of running a cold economy go well beyond stagnant wages and employment opportunities to impact mental and physical health, with implications for labor force participation and productivity. Unemployed workers are more than twice as likely to suffer from depression as those currently employed; according to polling by Gallup, the long-term unemployed — those who have been out of work at least 27 weeks — are three times as likely to suffer from depression than those with jobs (Crabtree 2014). The economic and social challenges and stigmatization associated with unemployment contribute to disproportionate instances of mental health illness, alcohol and drug abuse, failed relationships, suicide and attempted suicide, and a variety of other personal and social

ills (Goldsmith et al. 1997). Tragically, this lack of economic opportunity at times translates into what economists Anne Case and Angus Deaton have termed “deaths of despair” (2020). In fact, a one percentage point increase in the unemployment rate is associated with a rise in opioid deaths by 3.6 percent and a 7 percent increase in the overdose rate (Hollingsworth et al. 2017). In short, there is substantial long-term scarring associated with weak labor markets, scarring often hidden by headline unemployment rates.

The costs of running too cold reach beyond labor market effects, simultaneously weakening business investment and the productivity growth it generates. The effect is twofold. First, businesses expect lower consumption growth and therefore invest less. Second, businesses want to economize on scarce resources, but if labor is never scarce and wages remain stagnant, there is less pressure to invest in labor-saving technologies that raise productivity growth, even when interest rates are relatively low.

Protracted downturns and slow recoveries have exacerbated a long-run trend of declining U.S. investment. Business formation and investment has been markedly slower in recent decades across the economy. Mason (2017) found that 10 years after the Great Financial Crisis real investment spending was less than 10 percent above its pre-crisis peak, due in large part to weaker aggregate demand from running the economy persistently too cold. This was clear in 2019 when the Fed cut rates in efforts to spur investment and growth which, despite fairly low unemployment, were lackluster at best. The investment slowdown was particularly acute for new and small businesses who have a harder time accessing capital to start or grow a business (Mondragón-Vélez 2015). The pandemic has set small businesses back even further. Financial conditions are “fair” to “poor” for 57 percent of small businesses, with businesses owned by people of color disproportionately worse off (Federal Reserve Bank of Atlanta 2021). Would-be entrepreneurs have lost savings and are readjusting their risk assessments in the decision to start a business — as are banks and investors that could provide capital to entrepreneurs. While more structural reforms to rebuild healthier long-term investment strategies in the private sector are essential, the government can play a pivotal role in supporting business investment in the near-term by sufficiently priming the economic pump to raise aggregate demand.

When policymakers fail to take the necessary actions to reheat a too-cold economy beyond lukewarm, there is a risk the economy will drift onto a slower growth track from which it will have a hard time bouncing back. One reason is “hysteresis,” a phenomenon where prolonged periods of recession and an operating below capacity can lead to lasting harm that slows potential growth (Acharya et al. 2019). In other words, persistent demand

shortfalls can weaken the economy's long-run growth rate by slowing investment and productivity growth. Unlike the story told in basic economics textbooks, the economy does not naturally rebound to some predetermined, "equilibrium" growth path.

These long-term economic effects of recessions, if unaddressed, can even weaken the country's financial position. In other words, spending less now does not necessarily lead to more savings tomorrow, as was touted following the Great Recession (Alesina 2010). Rather, spending too little can lead to a permanently weakened economy and a more precarious budget position in the long run. Even the International Monetary Fund, long an advocate of austerity, has come around to the view such policies are often counterproductive, especially given their negative effects on inequality and growth (IMF 2016). After all, a country's budgetary position determined not just by spending, but also growth and revenue. The spending cuts that come with austerity tend to curtail GDP, and thus tax revenue, with every dollar of cuts leading to a contraction in GDP of \$1.5-\$2.5 (Richards and Stiglitz 2020). Here, the Biden-Harris Administration is rightly steering down a different track from the once-dominant austerity advocates, but there is still further to go and more space to pursue these goals.

4. Running the economy “hot” will build an inclusive and prosperous America and cool the planet

The solution to the problems created by running the economy too cold is to turn up the heat with even more spending. As we look beyond the immediate health and economic crises caused by COVID-19, policymakers should use more heat to forge an economy capable of sustaining higher growth that is more equitable and resilient to similar potential shocks from climate change. Additional spending would be more than short-term stimulus policy. It should seek to address the long-standing challenges afflicting the U.S. economy and build the foundations for longer-term sustainable prosperity by increasing productivity growth and opportunities for good work.

The Biden-Harris administration's \$2 trillion proposal for investments in infrastructure modernization, clean energy transformation and paid caregiving work represents an

important first step in this direction. Significantly more will be needed to achieve these transformations, maintain true full employment and prevent the economy from slipping back into its pre-pandemic morass of not enough jobs, too much inequality, too little investment, and unsustainable fossil fuel dependence. Given macroeconomic conditions, Congress still has the space to spend big now — and deficit-finance the majority of the investment package — in ways that create jobs and productivity improvements and lift America's potential output to a higher trajectory, opening even more fiscal space to responsibly invest in the future. While the plan is a reasonable start, we explain why more investments will be needed and what returns on investment America can expect if policymakers deliver.

The solution to the problems created by running the economy too cold is to turn up the heat with even more spending.

THE INFRASTRUCTURE IMPERATIVE

From collapsing bridges to lead-contaminated drinking water, the United States has no shortage of physical infrastructure needs, as the American Society of Civil Engineers keeps reminding us. America has been disinvesting in public infrastructure for more than a decade, eroding the public capital stock (Ayres Steinberg and Hersh 2013; Bivens 2017). The ASCE (2021) estimates that just the depreciation of neglected existing public infrastructure assets will cost the United States \$10 trillion in GDP, 3 million jobs, and \$2.4 trillion in lost exports by 2039 due to increased costs of doing business.

Spending on infrastructure yields immediate benefits, creating jobs directly in construction industries and indirectly in industries supplying goods and services for construction as well as from the consumption spending from incomes generated in these activities. Every job created directly in infrastructure construction creates an additional 17.8 jobs in other sectors of the economy (Bivens 2019). Current infrastructure needs of the American economy amount to at least \$6 trillion, roughly half of which is already funded through existing revenue sources. Therefore, to meet the full needs of the economy, policymakers must invest an additional \$2.6-3.2 trillion in physical infrastructure over the next decade. This will translate into robust job growth, creating an estimated 5.2 million jobs throughout the decade (Pollin et al. 2021). To the extent that infrastructure is

financed through deficit spending rather than tax increases or other “pay-fors,” the stimulative impact will be larger (Abaid et al. 2014).

Infrastructure is not just about the jobs that can be created today, but the economic opportunity that can be generated for tomorrow by enabling people, goods, and ideas to move around more efficiently. Research on the longer-term return on investment from public infrastructure finds that, on average, every \$100 spent on infrastructure generates an additional \$17 benefit, though some research finds a return on investment as high as 73 percent (Bivens 2017; Heintz 2010; Berechman, et al. 2006). It is likely that the benefits are even larger than these estimates suggest as infrastructure projects can achieve multiple purposes at once. For example, expanding rural broadband internet access not only creates immediate jobs installing communications infrastructure, but will help bring employment, education, and health care opportunities to all of America’s nooks and crannies.

Such investments can also address major environmental justice concerns. Overhauling public water systems to eliminate lead and other toxics not only will create a lot of jobs and lower utility prices for families and businesses, but also yield lifelong impacts on educational attainment, earnings, and productivity for those living in affected communities. Reinvesting in and expanding sustainable public transportation systems will create direct jobs, but also open new opportunities for labor force participation and higher wages and productivity — connecting people to jobs that were literally out of reach — reduce greenhouse gas emissions and improve air quality and health outcomes.

Achieving this transition and reaching net neutral carbon emissions by mid-century will require investment on the order of 5 percent of GDP per year for the next ten years, roughly \$1 trillion per year.

RIISING TO THE CHALLENGE OF CLIMATE CHANGE

Climate change is another problem that requires strategic long-term thinking — and a great deal of investment. Failing to limit global warming to 1.5-2°C above pre-industrial levels as determined in the Paris Climate Accords would mean unprecedented economic

and human disasters far more severe than the COVID-19 pandemic. The U.S. Global Change Research Program (2018) estimates that climate change, if unabated, will permanently reduce U.S. GDP by 10 percent (a number we believe to be very conservative). Economic losses will result from harm to physical assets, reduced industrial and agricultural productivity, increased mortality and health impacts on labor force participation, and a destabilized world (Hsiang 2017; Paul, et al. 2019). That is why Treasury Secretary Yellen calls climate change “an existential threat” and the biggest emerging risk to the U.S. financial system (Guida 2021).

These outcomes can be averted if policymakers act now and act boldly. Fortunately, responding to the climate crisis presents more opportunity than cost. A comprehensive agenda to decarbonize the economy will require massive investments to develop and deploy technologies to transform energy systems, transportation, agriculture, and industrial, commercial, and residential energy use. Achieving this transition and reaching net neutral carbon emissions by mid-century will require investment on the order of 5 percent of GDP per year for the next ten years, roughly \$1 trillion per year. This will entail high-tech endeavors like installing smart-grid transmission networks and low-tech but high-return residential retrofits, as was done under the 2009 American Recovery Reinvestment Act (Paul, et al. 2019).

Green investments, often wrongly portrayed as at odds with growth, are actually some of the most potent economic policies Congress can consider. IMF economists estimate green spending yields broader economic benefits that are two to seven times larger than those associated with non-eco-friendly spending (Batini, et al. 2021). Decarbonizing the economy will create upwards of 8 million new, family-sustaining jobs per year for the next decade (Pollin, et al. 2021), but the benefits extend well beyond those gains. The investments envisioned will make the economy significantly more efficient and productive, lowering energy costs for families and businesses while improving health outcomes and making the U.S. economy resilient to systemic disruptions like what we have experienced over the past year (Paul, et al. 2019; Griffith and Calisch 2020; Pollin 2020). Additionally, the spending has the power to revitalize local economies in regions of the country hit hardest by the energy transformation and deindustrialization, like West Virginia, Pennsylvania, Ohio, and Maine (PERI 2021). Finally, this spending is absolutely essential if we are to preserve a habitable planet for current and future generations.

AN ECONOMY THAT CARES IS AN ECONOMY THAT THRIVES

The caregiving economy is also a long-neglected sector where strategic investments and a keen policy focus can make a crucial and lasting difference. The COVID-19 “she-cession” has laid bare the injustices of America’s inadequate and unequal caregiving infrastructure and its drag on overall economic performance. A lack of investment in childcare and long-term care has caused preventable harm to individuals, families, and the economy overall. The current threadbare caregiving system provides insufficient and unaffordable support for people in times of need, drawing workers out of the labor force and pressuring them into jobs that allow the flexibility for caregiving, even at the expense of greater earnings or jobs that would better match the full use of their abilities. The burden has fallen especially heavily on Black women, more than two-thirds of whom were the sole or primary breadwinner in their family prior to the pandemic (Glynn 2021). Fifty-two percent of Latinas, 44 percent of Black women, and 34 percent of white women report that demands for unpaid caregiving negatively affect the amount of paid work they are able to do (Time’s Up 2021). In other words, America’s lack of paid caregiving infrastructure represents a glaring obstacle to achieving the country’s full economic potential.

The COVID-19 “she-cession” has laid bare the injustices of America’s inadequate and unequal caregiving infrastructure and its drag on overall economic performance.

Childcare is more expensive than college in a majority of states, averaging \$11,000 per year (Child Care Aware America 2018), well out of reach for most families. As a result, children do not receive the care they need, and parents — usually mothers — are forced to go part-time or stop working altogether. For children under six years, more than 65 percent have all parents working, and demographic trends will only increase pressures for workers dependent on childcare services (Savage 2019). The pressures on women to cover this need with unpaid caregiving work show up in U.S. labor force participation data, where the United States falls substantially lower than other high-income countries (Blau and Kahn 2013). In recent testimony to the House Financial Services Committee, Fed Chair Jerome Powell cited the lack of care investments as a significant drag on labor force participation and economic potential (Smialek 2021). The economic loss from women’s

labor force attrition runs to an estimated \$57 billion a year from fewer hours worked, reduced productivity, and diminished career opportunities (Belfield 2018). Like most things in the economy, the care burden caused by a lack of access to affordable healthcare, childcare, and adult care, has not been shared equally; rather, the care burden has been disproportionately shouldered by women, especially women of color. Distinct inequalities also exist in access to quality care, which can have lifelong impacts on health and cognitive development.

America's lack of paid caregiving infrastructure represents a glaring obstacle to achieving America's full economic potential.

On the campaign trail, **President Biden proposed investing \$775 billion over ten years to support the care economy.** While these funds were largely absent from the AJP, the Biden-Harris Administration is expected to release further spending plans in the coming weeks to address critical care infrastructure (Stein and Pager 2021). These funds will be directed to support affordable pre-kindergarten, childcare, and free community college. Estimates show that such investment would create an additional 2.3 million jobs a year for ten years in sectors that primarily employ women of color (Palladino and Mabud 2021). While this investment will help transition unpaid care work to paid care work, the administration must include safeguards to ensure the professionalized care jobs are high-quality, paying a decent wage and providing opportunities for skills development.

Benefits from investing in a robust caregiving infrastructure will be spread far and wide. Building a more inclusive care economy will deliver vital needs for those who require care — children, elderly, disabled, and the sick — while freeing caregivers to more fully participate in the paid labor market. Not only is this important for building a more humane economy, such investments will also pay lasting economic dividends. In Washington, D.C. for example, the rollout of two years of universal free preschool resulted in a 10-percentage point jump in the city's maternal labor force participation rate. Such increases in labor force attachment can contribute to sizable gains in the growth rate of the economy while expanding options for families in need of care (Malik 2018).

5. Conclusion

America still has plenty of fiscal room to run so we can achieve the goals of mitigating inequality, averting climate catastrophe, and reversing the long-term slowdown in economic growth. The spending on infrastructure modernization, deep decarbonization, and caregiving outlined above are not only the right things to do, but the right policies to protect our planet and put America's economy on track toward a more equitable and prosperous future. Such investments will provide meaningful improvement in people's day to day lives through building a people-centered economy.

Worries about economic “overheating” and misleading estimates of key economic projections from the Congressional Budget Office have for too long prompted policymakers to run the economy too cold, creating a self-reinforcing “doom loop” of diminished expectations and underachievement that left tens of millions of people unemployed, underemployed, or pushed to the sidelines of the U.S. labor market. Underperformance ensured overheating would not be a problem, but this achievement came at too steep an economic and social cost. The burdens of the cold economy — unemployment, underemployment, stagnant wages, and poverty — have been disproportionately placed on the shoulders of low-income people and people of color. Most certainly, the cure was far worse than the disease.

The spending on infrastructure modernization, deep decarbonization, and caregiving outlined above are not only the right things to do, but the right policies to protect our planet and put America's economy on track toward a more equitable and prosperous future.

It is predictable that prices of some goods and services will temporarily rise as the economy recovers from the pandemic crisis under this policy guidance. In fact, it is inevitable, in a mechanical sense, as prices rebound from the plunge experienced at the onset of the pandemic's “Great Lockdown” in 2020. But this is not the same as the wage-price spiral resulting in economy-wide inflation that critics of aggressive fiscal policy fear.⁷ Tepid inflation and overwhelming evidence of labor market slack ensure that the U.S. economy

is operating much further beneath its potential frontier than the inflation alarmists and deficit hawks suggest.

It's hard to overstate the human costs of this policy failure. Investments like those proposed in the Biden-Harris plan and discussed in this report will create jobs, draw more workers into the labor force, raise wages — especially for those at the low-end of the labor market. They will also increase innovation and efficiency in ways that boost America's economic potential even more, putting those pesky fears of an overheating economy even further at bay. Importantly, they all help address the existential threat of the climate crisis. But significantly more than \$2 trillion in investment will be needed to realize this promise. While in the near term, there is still space for new spending to be largely deficit-financed to support ongoing recovery, meeting the full roster of public investments needed to sustain the U.S. economy at full employment, tackle pressing challenges, and revitalize growth will require raising new revenue.

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About Groundwork

Groundwork Collaborative is a research and policy advocacy organization working to advance a coherent and persuasive progressive economic worldview capable of delivering meaningful opportunity and prosperity for everyone. Groundwork envisions an economic system that produces strong, broadly shared prosperity and power for all people, not just the White, wealthy few. Groundwork works in deep collaboration with economic policy experts, progressive movement leaders, labor leaders, and activists on the frontlines of progressive causes in communities across the country.



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Endnotes

1 The Administration is expected to introduce further spending proposals in the weeks ahead to address investments in caregiving work so that everyone has opportunities to participate fully in the economy and partake of its fruits.

2 These are referred to, respectively, as extensive growth (using more inputs of production) and intensive growth (using a given level of inputs more productively). In practice, economic growth is more complicated. While we often think of technology as embodied in capital goods, the skills and knowledge embodied in workers is a more important determinant of long-term growth. Productivity is not a fixed, technical relationship, but can vary with work intensity.

3 We focus on Congressional Budget Office estimates most relevant to U.S. policymakers, although economists in the private sector and other public and international institutions use a number of different methods to estimate the level of potential output (Fontanari, et al. 2019; Guisinger, et al. 2018; Shackleton 2018; Basu and Fernald 2009). A thorough review is beyond the scope of this paper, but all methodologies, in essence, produce elaborate and technical estimates of recent trends and assume the economy always operates at, near, or is quickly converging on full capacity under market mechanisms, ignoring the insight of John Maynard Keynes (1936) that the economy will not automatically rebound to its previous trend. In particular, the "New Keynesian" and real business cycle theories that have come to dominate macroeconomics dismiss this lesson from Keynes, leading to dire economic policy mistakes.

4 It is arguably even worse than this seems. Labor market statistics define the labor force over the civilian, noninstitutional population. Because Black and brown people of color are incarcerated at disproportionately higher rates (Sawyer 2020), these populations are excluded from tabulation of the labor force and official statistics arguably understate the true state of unemployment for these groups.

5 Employment Act of 1946, Pub. L. 79-304, ch. 33, 60 Stat. 23 (1946); Full Employment and Balanced Growth Act of 1978, Pub.L. 95—523.

6 On August 27, 2020, the Federal Open Market Committee (FOMC 2020) updated its goals and policy strategy, communicating that it would allow inflation to run above 2 percent in the near term in order to anchor long-run inflation expectations at 2 percent and make up for past misses on inflation and “shortfalls” in employment.

7 Skanda Amaranth and Alex Williams (2021) provide a thoughtful analysis of what to expect for inflation as the economy transitions out of crisis.

